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# THE SCHOOL REVIEW

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## NEW PROBLEMS IN SECONDARY EDUCATION<sup>1</sup>

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DAVID SNEDDEN

Commissioner of Education, Boston, Massachusetts

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1. The great problems of secondary education today are, of course, problems of aim. The concrete, immediate aims which control the large majority of our administrative and pedagogic procedures in the American high school (and how very concrete and definite and exacting many of them are!) are of quite unknown value. We have not defined them in terms of human good; we seem unable to estimate the value of the results achieved in our efforts to realize them. We teach our prescribed algebra strenuously and with some very definite objectives, but we flounder pitifully when we try to prove that these objectives are really worth while. We have refined and standardized our immediate objectives in teaching physics and chemistry, but what we actually attain by it all in terms of human well-being remains concealed in the obscurity of vague phrase and inadequate generalization. We drive our boys and girls hard up the steep slopes of Latin, French, and German, but we are forced to fall back on mystical and uncertain faiths in the endeavor to justify our driving of particular youths up these particular steep slopes.

2. We have in reserve, of course, large, splendid aims which are alleged, finally, to guide the evolution and destinies of our

<sup>1</sup> An address given before the Academic Principals' Association, Syracuse, New York, December 28, 1915.

secondary schools. Do we not freely use such terms as "character formation," "mental discipline," "self-realization," "social efficiency," "culture," "citizenship," "leadership," "intellectual power," and a score of other unanalyzed general phrases, as expressive of our ultimate goals? And in these are there not summed up most of the purposes that really count in this life? It must be admitted that we do still live largely in a maze of faith (and fable) as regards education. The geography of mind has given us as yet extremely few maps that we can read or follow with confidence. We must still insist, even for our own comfort, that the Isles of the Blest lie just beyond the straits, and that our hard journeyings will surely bring us thither. So, in imitation of mariners in other seas where compass and chart and buoy have long been in use, we hoist full sail and push for our magic shores. For, after all, our great, fine aims in secondary education, expressed in vague even though aspiring phrase, are in reality only faith aims; in practice they rarely actually guide us in choice of ways and means; and we seldom stop to measure the tangible results of our teaching against the shadowy and ever-varying interpretations of these aims as set forth in books and journal articles.

3. Doubtless, many of us, at times, wish we could translate our faiths into certainties. We should sincerely like to know in truth what the prolonged study of algebra contributes to the making of the trained mind which, as ordinarily conceived, is surely a thing of great worth. We should like to be able to demonstrate that our boys and girls actually become better citizens in part by virtue of the dry study of history which we have enforced. We wish we could prove that the hundreds of thousands—nay, millions now—of American men and women, who have some time and somewhere studied Latin, are better users of the vernacular because of that study. We should be gratified to obtain definite evidence that the science work of our high schools does in important measure result in appreciation of "scientific method" and a functioning mastery of scientific principles. We long for assurance that our high-school "cultural" education, now the universally accessible opportunity of the American adolescent boy and girl, does indeed refine manners, correct tastes, enrich minds, and ennoble spirits

in a degree at all commensurate with the efforts expended on the really fine bodies and brains coming under its influence.

4. The obligation rests, therefore, on all friends of secondary education (the need is at present greater here than in fields above or below the high-school period) to assist in defining valid aims through which to control the educational processes employed, and against which to measure results achieved. To discover, analyze, describe, and render effective these aims will prove a gigantic task. At all stages will be encountered the open and the secret opposition of the beneficiaries of vested educational interests, as well as that of the innately and honestly conservative. The traditionalist and the obscurantist will seek to block every progressive step. Unwise radicals will, through rash utterance and ill-conceived experiment, cover with confusion the sanely constructive. A halting sociology and a psychology too much devoted to the thin upper air of pure science will lend but poor assistance to an evolving system of scientific education, a system that must however in the last analysis find its chief supporting knowledge in these sciences.

Much and varied experimentation as well as study will be required for all this, and we educators do not yet take kindly to the prolonged effort, the close attention to detail, and the joyless suspension of judgment involved in experimentation of genuinely scientific character. In education we still live in an age of passionate judgments, cherished faiths, and intolerance of scientific probings. In the nature of things, it could not be otherwise. Our field of work is so complex, so dependent on subjective rather than objective standards, and so involved with our fundamental social and religious associations—the way of the emotional life—that no different development has heretofore been possible. Only within the last few years have some of us begun to catch glimpses of what a scientific system of education, comparable in some essential respects to a scientific system of medicine, of agriculture, or of transportation, might be. But we do catch visions now and then of a system of education yet to be developed whose objectives shall have been founded in an ample and tested knowledge of the needs of men and women fit for a twentieth-century civilization, supplemented by

equally ample and tested knowledge of the educability of the endlessly varying types of plastic humans with which the schools must deal. Even now, in the early morning half-light, we can begin to question some of our faiths, dissect our traditions, and give partial form to some of the problems which we know must await solution.

5. We can, as one phase of this process, take the established subjects of secondary education, and seek so to define the valid educational aims which should be realized through them that these aims, while definitely expressive of demonstrable human values on the one hand, will also serve to guide and test the effectiveness of the means and methods employed in the effort to realize them.

No one seriously contends, for example, that the study of modern languages should be discontinued in our public high schools. But no one can carefully examine our present procedures in teaching modern languages without reaching the conclusion that these procedures are at present so fundamentally aimless, unscientific, and traditional in character as to render this department of education wasteful and futile in the highest degree. In teaching foreign languages we have no clear and defensible conceptions of the purposes that should be realized, no satisfactory standards of attainment, no scientific evaluations of methods, and no criteria on the basis of which we can advise pupils to undertake, or to continue in, these subjects. Hence we actually permit or induce or require hundreds of thousands of American youths each year to give precious hours to these subjects with a resulting superficiality of attainment that would be ludicrous if it were not so pathetic. Our youths almost never learn to speak or to write a foreign language, and rarely to read it without mental translation of a wasteful and hampering character. We allow a young college graduate who has never been abroad to teach French and German, when, forsooth, he or, more probably, she could not hold ten minutes' intelligent converse with a non-English-speaking native of either France or Germany.

Similar statements might be made with reference to many other subjects taught in secondary schools. Certainly it is desirable and it should be possible for us in the near future to answer questions like the following with some degree of scientific exactness:

a) What are the really valid aims that should control in the teaching of, e.g., French, to youths who will presumably live and work and die in America—America, which is separated by an ocean from France, which has but few non-English-speaking French in its population, and which can draw freely on the culture products and scientific output of France in the form of translation and of sympathetic reinterpretation in English? We can certainly teach a few of our young people, carefully selected to this end, a great deal about French language and literature. We can render it possible for these few to live sufficiently long in France to attain a moderate mastery of spoken French, and to acquire some insight into the intimate aspects of French life. We can so reward the efforts of these few to obtain a genuine mastery over French language, French thought, and French institutional life, that we shall always be assured of their availability when we require messengers, governmental and private, to France. They will serve as the interpreters of France to us and of America to France.

But now we follow a different course. We assure ourselves of the competency of none. We teach a smattering of French grammar and French translation to many. Is this superficial contact at all worth while? We could, indeed, by methods very different from those we now employ, teach a reading knowledge of simple French, or of specific departments of so-called technical French, to many persons. But is this really worth while? Perhaps; but must we not ascertain to whom, probably, and for what purpose, probably? We have not done these things. We have allowed matters to drift, unsound preconceptions to develop, illusions to persist.

b) Why should algebra be prescribed as an almost inescapable requirement for admission to colleges? There is no evidence that this study serves as a necessary foundation for subsequent vocational or cultural studies except in a few easily anticipated cases. There is no evidence that it has any exceptional values as a mental gymnastic. The assumption that the methods or generalizations peculiar to it have far-reaching intellectual significance is quite unsupported by evidence. The plausible hypothesis that aspirants for admission to college who have failed in algebra are almost

certainly not qualified to survive in the higher altitudes of college studies is interesting, but it certainly needs further examination, partly to discover whether, even if valid, its requirements could not be satisfied by one month's purposefully directed study of algebra. Algebra, as now standardized, is unquestionably a valuable and necessary study—for a few people. It may be a very interesting intellectual recreation for some others. Let us define and delimit its possible useful functions in these directions. But let us go farther. Let us see who can safely be excused from it; let us discover possibly more useful substitutes.

c) English literature is one of the few high-school subjects as to the importance of which there is little dispute. But we are far from being agreed as to what are the definite aims which should control in the selection of its materials and in devising methods of teaching it. The study of English literature is surely not to be regarded an end in itself. Then, to the realization of what ends is it a means? Can we not define these ends? And, having defined them, can we not derive therefrom standards for selection of materials and testing of methods? Many of us believe that current programs of secondary-school English, in spite of the immense improvement they show over programs in vogue even a decade ago, are nevertheless still too "classical," too historical, too much the reflection of the pedantic interests of academic minds which are more concerned with the anatomy and origins of literature than with its functioning value in the spiritual equipment of the individual and the social group. It is submitted that a large amount of most useful constructive educational work can be done in the endeavor to answer with some scientific precision questions like these: (1) Just what distinct different ends should be subserved by the study of literature by adolescent boys and girls? (2) Just what different methods of "study" of literature are practicable? (3) Just what are the tests of the "functioning" of the study of literature? (4) Just what service do we expect the study of classical literature, e.g., productions of Shakespeare or Milton, to render to youths of twentieth-century America? (5) What is the place, in this study, of purely contemporary literature, including last month's magazine? (6) To what extent and why have American

standards of literary appreciation changed as a result of the teaching of literature which we have carried on in school and college especially during the last twenty-five years? (7) Would it not be possible greatly to improve the results of the teaching of literature if we discontinued class meetings in this subject, using the teacher's time instead for individual consultation on home assignments, the latter being adapted to individual tastes and interests? (8) Finally, could we not greatly advance the teaching of English literature by completely divorcing it from all phases of the teaching of English expression?

*d)* Commercial education now occupies a large place in secondary education. At present this commercial education is a mongrel thing—it pretends to be vocational, but in reality it is only partly and confusedly so. For many pupils it actually functions as a sort of second-rate general education. In its essential characteristics it is typically American in its fostering of small illusions and misrepresentations, its permitting the shadow to be substituted for the substance, in the general slackness of its standards. Can we not ascertain to what extent and under what conditions it should be genuinely vocational, and to what extent really a type of general or cultural education?

6. While the study of the traditional subjects with a view to ascertaining the valid aims which should govern in their organization and presentation will prove necessary and desirable, no less importance should be attached to the formulation of new subjects to meet the educational needs of our youth for good general or liberal education. Already we are witnessing attempts in this direction. One group of educators is convinced that the science subjects now taught in high schools, whatever their results in other directions may be, do not give the general appreciation of the part played by scientific knowledge in modern life, nor a general capacity to interpret scientifically the phenomena of the pupil's environment that should be required in general education. The customary science subjects, especially physics and chemistry, have apparently become so formalized and rigid that their study seems to yield little in the way of abiding interests or insight. The demand is being made for a new course, to be called, perhaps, general science,



the aims of which must differ greatly from those now in fact controlling high-school science teaching. Can we, first, devise and formulate definite aims for the new subject, or, rather, can we so define and state the pedagogic needs of our youth in this field as to interpret therefrom aims for a new science subject? And can we then, having formulated these aims, assemble the materials—exercises, readings, experiments, projects, study units—which, rightly organized, shall give the new study pedagogic substance? This is one of our problems.

Again, we must by this time be keenly aware that, in spite of assertions to the contrary, our high schools do not give training or instruction toward citizenship in accordance with sound principles of aim or definite principles of method. We say, or allow it to be said without protest, that our high schools find their chief justification for public support and public control in the fact that in them are to be trained not merely the voters, but the most influential voters, the leaders of the future. And yet we give very little conscious attention or systematic effort to any purposeful form of education to this end. The need of this education is clearly manifest. Here, again, a few enterprising spirits are endeavoring to assemble the materials for a concrete, vital study of community social life—community civics. A long period of patient investigation, study of local conditions, and constructive thinking will be required to bring this subject to full usefulness. In the meantime let us hope that, because it starts largely free from traditions and has involved some conscious apprehensions of the educational needs of the community and the youth, community civics, under that or any other name, will be more genuinely functioning study than the “civil government” which was, in some respects, its prototype.

7. The attempts now being made to organize new high-school subjects calculated to make definite contributions toward the richer liberal education of adolescent youth are still insecurely based on psychology and sociology. There are greatly needed, now, comprehensive and detailed studies of the real objectives of secondary education as these must be found in the socially and personally efficient adult whose type we try to aid in reproducing (efficient, be it remembered, in *living*, no less than in making a living—as

a utilizer of the world's best goods no less than as a producer of good service).

Right methods of study to ascertain these objectives would probably include the following:

a) Analysis and classification of all the qualities—capacities, powers, attitudes, sentiments, faiths, knowledges, ideals, aspirations, skills, etc.—possessed by a series of selected individuals of from twenty-five to sixty years of age, and selected because typifying in their composite sense the standards to which we desire that our youth—the adults of the next generation—shall approximate.

b) The classification of the qualities thus described, or phases of them, into three groups, as fully as our present inadequate knowledge will permit—namely, those due to heredity, those due to the nurturing effects of normal environment, and those due to purposeful education.

c) Further analysis of hereditary qualities and qualities due to nurture of environment, with a view to ascertaining how far in any given case systematic education has, or should have, modified them.

d) The assembling of the more or less *general* or *common* qualities, as to which the educational methods of the school may be made to apply, as a basis for school programs.

The method here suggested should so reveal educational needs and possibilities as to give us definite objectives for new studies. A few examples may serve as illustrations.

a) A study of successful men (successful in the best sense of the word) will show that they have acquired somehow and somewhere a considerable body of knowledge (or appreciations, the by-products of concrete experience) of the elemental facts of psychology. They know the place of habits in life and the significant facts of habit formation and correction. They are conscious of the possibilities of systematic intellectual approaches in the study of new problems. In dealing with others, they are aware of the probable direction and character of instinctive reactions. They can understand and make allowance for fixed mental attitudes due to environmental nurture.

Against these we may place men who do not possess these powers, and whose personal and social effectiveness are impaired

by this lack. These persons have poor control of their own careers, and are weak or negative in their co-operation with, or influence on, others, because chance has not favored them with comprehension or appreciation of fundamental principles of psychology, as even now known.

But we perceive that even informed men have won their knowledge with difficulty, and wastefully. The conclusion may easily be reached that during the secondary-school period it should prove possible and would be profitable to give some systematic instruction in a very concrete and objective psychology, and training in the application of this knowledge to the interpretation and control of the personal and social affairs of life.

Personally, I believe that we shall soon find an irresistible demand for just such a development as is here forecasted. We need it as a basis for vocational guidance, for training in the arts of study, for vocational training, and as a fundamental means of many forms of instruction in hygiene.

b) Again, we may find as a result of our studies that as a means of personal culture we greatly need to develop *appreciation* of good art. But in our present curricula we have hardly any teaching aims or materials organized to this end—not even in literature as now taught. So it may prove possible, by means and methods not now guessed, systematically to develop art appreciation—taste, discrimination, conscious standards, the constructively critical attitude which finally results in a general demand for good things.

c) It is now clearly within the reach of the secondary school to organize a systematic course in vocational guidance of such a character as quite definitely to minister to two distinct ends—one practical, the other cultural. This course should: (1) by objective study of the requirements and possibilities of the various callings in which men engage, by systematic examination of the potential powers of individual pupils, and by the deliberate cultivation of vocational ideals, enable the youth eventually to find his way into a vocation most suited to him; and, (2) by giving all pupils a survey of occupations and by having them all study their own possibilities in relation thereto, produce the sympathetic, socialized, and broadened vision essential to highest citizenship and to truly democratic personal culture.

d) The need of a more robust, more inclusive, and more generally effective physical education for adolescents is everywhere felt. The secondary school has here abrogated its true functions in favor of the athletic coach. It has subordinated its true mission in fostering right physical development to pandering to the social demand for spectacular contests between specially trained individuals or teams—the modern counterpart of the gladiatorial combat. It has toyed with gymnasiums and shower baths, but has largely neglected to provide comprehensive programs of outdoor physical development, under conditions which would utilize in full measure possible voluntary unpaid leadership by advanced pupils (the future captains of martial, industrial, and social organization), which would insure compulsory activities for those unwilling to volunteer, and which would make for the idealization of vigorous, weather-defying, toil-enduring, adaptable physical hardihood. Here, also, lie large opportunities for an almost new field of secondary education.

8. Many other lines of constructive action will certainly be revealed as we systematically address ourselves to the study of the social objectives of the education of youths from fourteen to eighteen years of age. For many of our pupils the period devoted to secondary education must include time for definite vocational training. The needs in this direction are already becoming defined with some clearness. Efforts to this end must now center largely in obtaining real, not make-believe, vocational preparation. Very many of our present offerings of so-called vocational education are only shams—though they may be sufficiently good imitations of real vocational education to deceive the tax-paying public.

The final and general thesis is this: All education is tending to become scientific, to become a field of applied science, as are already medicine, war, navigation, agriculture, metal-working, and the like. But efficiency of action in any field of applied science is possible only on the basis of clearly defined aims. Right methods and sound testing of results are practicable only as they are consciously and specifically based upon clearly defined and carefully tested aims. To prove itself capable of developing in accordance with scientific standards and principles education must in all its phases formulate and study its new problems of aim.